

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-44 (Canceled)

45. (New) A process for production of grinding wheels provided with an abrasive product, the process comprising the steps of:

providing a blank constituted from abrasive grains or from abrasive grains and an upper layer of constituent without abrasive grains, and at least another constituent;

superposing the blank and the at least another constituent to form at least two layers of constituent.

46. (New) A process according to claim 45, wherein the blank comprises at least one layer of constituent without abrasive grains, especially a reinforcing sheet.

47. (New) A process according to claim 45, comprising the steps of:
prior to the providing step forming the blank from an abrasive product comprising abrasive grains provided with a coating constituted by a binder by:

pouring the abrasive product into a mold;

adjusting the level of the abrasive product in the mold to a desired value; and

compressing the abrasive product.

48. (New) A process according to claim 46, comprising the steps of:
prior to the providing step forming the blank from an abrasive product comprising abrasive grains provided with a coating constituted by a binder by:

pouring the abrasive product into a mold;

adjusting the level of abrasive product in the mold a desired value;

depositing at least one other layer of constituent without abrasive grains, especially a reinforcing sheet, on the abrasive product to form a stack; and

compressing the resulting stack.

49. (New) A process according to claim 45, further comprising the steps of:
successively laying layers of constituent including the at least one blank one on top of
the other to form a stack;

heating the stack; and

thereafter compressing the stack.

50. (New) A process according to claim 45, comprising the steps of:
arranging the layers in the form of stacks along an assembly line equipped with layer-
laying stations;

providing stocks of stacks at at least certain stations, from which the stocked stacks
are taken one by one to superpose thereon a new layer of constituent;

and evacuating the stack provided with its new layer from one station toward the
following station.

51. (New) An installation for making grinding wheels provided with an abrasive
product, comprising at least one machine for making blanks from abrasive grains, an
assembly line equipped with stations disposed in succession for superposing at least one
blank obtained from the blank-making machine and at least another constituent layer to
constitute a stack of superposed layers, followed by a heating station where the stack of
superposed layers is heated, and with at least one pressing machine for compressing the stack,
the at least one pressing machine having a form of a pressing station positioned at one of an
end of the assembly line or downstream from the assembly line.

52. (New) An installation according to claim 51, wherein the blank-making
machine is provided with a production carousel equipped with molds and specialized working
stations comprising a station for pouring an abrasive, a leveling station, a pressing station, a
discharge station, a cleaning station, and a storage table for storage of produced blanks.

53. (New) An installation according to claim 51, wherein the assembly line comprises an endless conveyor that carries fixed plates configured to receive removable plates, each removable plate configured to receive one the stacks of superposed layers.

54. (New) An installation according to claim 51, wherein the assembly line is provided with a station for laying rings followed by several stations for laying layers of constituent and the heating station.

55. (New) An installation according to claim 51, wherein the assembly line is provided with a least one station comprising a temporary stocking device.

56. (New) An installation for production of grinding wheels, comprising:
a station for filling a mold with abrasive grains or with abrasive grains and an upper layer of constituent without abrasive grains from which at least one blank is formed;
a machine for pressing the abrasive grains or the abrasive grains and the upper layer of constituent without abrasive grains contained in the mold in order to form the blank;
an assembly station designed to form a stack of superposed layers from at least one blank and at least one other layer of constituent;
a pressing machine for compressing the stack and forming the grinding wheel.

57. (New) An installation according to claim 56, wherein the stations and machines are disposed around a production carousel on which at least one mold is fixed.

58. (New) An installation according to claim 57, wherein the production carousel comprises sectors corresponding to working stations for consecutive operations, and each sector comprises at least a first position for a mold and at least a second position on which one or more layers of constituent of the grinding wheel are configured to be disposed.

59. (New) An installation according to claim 58, wherein the following consecutive operations are performed:

deposition and leveling of abrasive grains coated with a binder in a mold situated at a first position of a sector, especially by means of a tool, and deposition of at least one layer of component, especially a protective layer, at a second position of the sector;

deposition of at least one layer of component, especially a reinforcing sheet, on the abrasive grains in the mold at the first position, and deposition of at least one layer of component, especially a protective sheet and/or a reinforcing sheet, at the second position;

pressing by the pressing machine designed to form at least one blank from the layers of constituent contained in the at least one mold;

forming a stack, which takes at least one blank from the first position to lay it at the second position and thus constituting at least one stack formed by the layers of constituent disposed beforehand in a location and by the at least one blank;

pressing the stack situated at the location in order to consolidate a grinding wheel by the pressing machine; and

evacuation of the grinding wheel.

60. (New) An installation according to claim 51, wherein the pressing machine comprises a carousel equipped with jack-operated presses provided with a movable tool assembly, the jack-operated presses comprising a mold provided with a bottom and a side wall, the side wall mounted slidably around the bottom, the jack-operated presses further comprising a mold support fixed to a piston of the jack, interlocked by a first spring device to the bottom, and interlocked by a second spring device to the side wall, whereby during extension of the jack, the bottom under the influence of the first spring device and mold support subjects the stack to a pressing force while the side wall under the influence of the second spring device and the mold support surrounds the stack and, during retraction of the jack, an upward movement of the side wall is initiated while the bottom is still against the

stack and then the upward movement of the bottom occurs while the side wall continues its upward movement.

61. (New) An installation according to claim 51, wherein the pressing machine is provided with presses, each equipped with a support for a removable plate configured to receive a stack of layers of constituents of the grinding wheel, and with a cam surface over which rollers travel, each roller interlocked with a support to raise the support for evacuation of the grinding wheel and reloading of the removable plate on the assembly line.

62. (New) A grinding wheel provided with an abrasive product, produced by the process according to claim 45, comprising at least one reinforcing layer pierced by holes in which part of the abrasive product is distributed.

63. (New) A grinding wheel according to claim 62, further comprising a central ring.

64. (New) A grinding wheel according to claim 62, further comprising at least one blank sandwiched between two reinforcing layers.

65. (New) A grinding wheel according to claim 62, wherein a thickness of the grinding wheel is less than or equal to 2 mm, or even less than or equal to 1 mm.

66. (New) A factory or factory section for production of grinding wheels, provided with an abrasive product, wherein the factory or the factory section is divided into at least first and second zones, and the first zone is designed for production of blanks constituted from abrasive grains or from abrasive grains and an upper layer of constituent without abrasive grains and the second zone is configured for assembly of at least one blank and at least one other layer of constituent without abrasive grains in order to constitute a grinding wheel.